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## Distance education: The development of online learning environments for the online student

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DISTANCE EDUCATION: THE DEVELOPMENT OF  
ONLINE LEARNING ENVIRONMENTS FOR  
THE ONLINE STUDENT

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A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Education:  
Instructional Technology

---

by  
Diana Marie Squillace

December 2003

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Diana Marie Squillace  
December 2003

Approved by:

  
Dr. Eun-Ok Baek, First Reader

11/3/03  
Date

  
Dr. Amy S.C. Leh, Second Reader

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## ABSTRACT

With the advancement of technology and Internet services, distance education has become a convenient venue for the learners who choose distance education over the traditional face-to-face classroom to achieve their higher educational goals. The characteristics of distance learners vary greatly; some are limited by distance or physical challenges, while many have family and employment responsibilities that would otherwise keep them from attending higher education programs. With technology becoming a large part of the corporate world, there are a growing number of on-the-job training courses offered online to employees who are required to upgrade their technical skills. While keeping the many faces of distance learners in mind, another very significant distance education learner is the educator. Educators are not only learning to incorporate technology into their lesson plans; their pedagogical perspectives are beginning to lean away from the theory of objectivism and toward the theory of constructivism. These educators have been coined as techno-constructivists.

Timely collaboration between educators and learners is a vital element of the learning process. Prior to the utilization of online learning environments that are

presently available to learners through a number of colleges and universities, correspondence was handled through the postal service by which communication between teacher and student was slow, impersonal, and not frequent enough to hold the student's interest. Online learning environments and email have solved the obstacle of untimely collaboration as email can be answered within a day's time, and chat rooms offer real-time collaboration.

This project examines the characteristics of successful distance education programs as well as the flexibility, friendliness, support, and tools that facilitate effective learning. Included with this project is the web site, "Learning Tools for the Online Student." This web site provides learners the opportunity to familiarize themselves with learning tools that are popularly utilized by educators and learners. The web site is located at: <http://www.geocities.com/dianasquillace/>.

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There are no words great enough to express the gratitude I feel towards my husband Dane, for his constant love and support he offered to me while I strived to meet my educational goals. He set aside what was important to him so that I could upgrade my employment qualifications with this master's degree. His patience was steadfast throughout the entire program, even when he was tired and at times even frustrated. It was his faith in my ability to succeed that kept me moving forward. Thank you Dane, for your strength and your greatness.

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## DEDICATION

This theses/project is dedicated to my loving husband and best friend, Dane. It was you Dane, who kept me believing in myself throughout this entire master's program. Many times you sacrificed your own wishes and even needs to accommodate my educational needs. Your belief in my abilities as well as your love and encouragement kept me moving towards my goals. My education is as important to you as it is to me.

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## CHAPTER ONE

### BACKGROUND

#### Introduction

Distance education is not a new concept; however with the advancement of technology and online services through the Internet or rather, the World Wide Web (WWW), distance education and distance learning environments are a marriage that have joined while offering a more interactive avenue for educators to present class courses and a more convenient learning platform for the post-secondary student to achieve his/her higher educational goals. Geographical Distance, employment, family responsibilities, and many times, physical challenges are the traditional limitations that have characterized the students who utilized distance education programs. Nevertheless, the convenience of the Internet is beginning to play a larger role in students' motivation for choosing distance education and distance learning programs above the traditional face-to-face classroom.

While examining the past, present, and future of distance education and distance learning, this project defines and differentiates distance education (the instructor's role) as well as distance learning (the

learner's role) and how the two have bridged and are presently employed in an interchangeable fashion.

This project examines the characteristics of successful distance education and distance learning programs as well as the flexibility, friendliness, support, and the online tools that facilitate effective learning environments. Learning environments such as Blackboard, Tapped-in, WebQuests, and the efficacy of the online syllabus are examined.

#### Telecommunications

Though online distance education and distance learning environments are the main focus of this project, various styles of educational deliveries are addressed, including the combination of asynchronous technology (email) with synchronous technology (television and video) as well as other computer-based telecommunications that link educators to learners and learners to educators who in present times may or may not be separated by geographic distance, and who are no longer separated by time in view of the fact that online learning environments have been made available to students. For the working post-secondary and college students who wish to enhance their education in a more convenient and timesaving manner than what the



traditional face-to-face classroom has to offer, virtual classrooms are growing more and more popular. Virtual classrooms are also more convenient for students who are physically challenged.

### Context of The Problem

As the technological landscape evolves and communication capabilities increase globally, issues and concerns naturally emerge with the changes. With the increase of Internet capabilities and the growing popularity of distance education and distance learning programs, an important question is begged, "Because of the initial investments involved with online learning, based upon economic status, what economic class of students is most likely to benefit and what economic class of students is most likely not to benefit from online learning environments?" This division of privilege was "coined as the "Digital Divide" by Lloyd Morriset, former president of the Markle Foundation (Roblyer, 2003, p. 191). With this division of privilege in mind another question surfaces, "How can distance education and distance learning programs be made more accessible to all students?"

Other pitfalls regarding Internet in it self, is the inevitable exposure to questionable materials, as well as copyright violations, privacy issues and plagiarism. With these problems in mind one might ask, "What can educators do to overcome unethical and illegal Internet behaviors that might interfere with the learning process?"

The use of Internet tools for educational and learning purposes presents the problem of "change," not only in a physical sense but also in pedagogical sense. The nature of distance education and distance learning logically changes the pedagogical positioning of educators and what they teach, as well as how they teach. With the advancement of technology in schools and in the workplace, educators must become facilitators and they must learn to operate and facilitate technology as a part of the educational process. The traditional professor-centered role in the face-to-face classroom is becoming more that of a coach while learners are becoming more that of autonomous and constructivist learners, or rather, technological-constructivist learners who are more in control of their own learning experiences.

Change is something that most people are resistant to. However, as the anonymous saying goes, "Change is the only thing that one can hold constant." Noted in a

National Association of State Boards of Education (NASBE) report (Trotter, 2002), "Any Time, Any Place, Any Path, Any Pace: Taking the lead on e-Learning Policy" some educators are reluctant to incorporate and consider innovative approaches such as e-learning into the curriculum. Also noted is that these resistant educators are the key barriers causing schools to lack e-learning policies. With this in mind, another problem presents itself, "What can educators do to meet the technological demands and advancements while incorporating computer-based learning environments into the curriculum to meet the educational needs of both the in-class learners and the distance learners? Ultimately, another question need be addressed, "How are distance education and distance learning programs changing and influencing the future of higher education programs?"

### The Significance of the Project

Although the use of tools is not unique to humans alone, Farbs (1978) describes humans as unique in that human's applications of tools are multifaceted and exceed the propensity of any other living being. Farbs also notes human's ability to learn throughout one's lifespan is enormous and open-ended, and that human's complexity of

language transcends beyond any other species by which ultimately leads to highly developed cultures and societies.

With learning being a significant constituent of humankind and a unique element of the human condition, humans learning environments have evolved concurrently with the evolution of humankind and the way humans use tools. The modernization of transportation and communication technologies has contributed to the advancements of distance education and distance learning programs. Presently, face-to-face classrooms are not the only means by which to learn. In fact, the application of computer-assisted teaching and learning environments have grown increasingly popular and in demand.

With the innovation of computer-assisted technology, distance education has evolved from distance education to an interchangeable place of distance education and distance learning.

Nasseh (1997) noted that distance education stems back to as early as 1873 when a woman by the name of Anna Ticknor developed a distance education program in Boston, that was designed to motivate and facilitate education to female learners who studied at home by corresponding by mail through the postal service. When considering the fact

that transportation was not nearly as advanced as it is today, mail was not transported in a timely manner. Later in time, authorized by the state of New York, the first recognized distance education correspondence program was commenced and was facilitated by Chautauqua College of Liberal Arts from 1883 to 1891. Controversy surrounded this alternative means of education, mostly because of the limitations of time and the vital element of interaction between teacher and student appeared to be a missing element.

According to Curran (2001) telecommunications have become a part of everyday life for people around the globe, and by the end of year 2000, over 400 million people had become Internet users. Businesses, organizations and individuals have adopted the Internet as a shopping place and a cost-effective means of communications via email, chat rooms, listservs, and educational support environments. Northrup (2002) noted that the (WWW) is the fastest growing medium, which took only three years to reach an audience of 50 million users; in comparison radio took nearly 37 years and television by which took close to 15 years to reach the same number of users. The growth pace of telecommunications via computer is phenomenal. Because of its growing popularity in the

workplace and at home, computer-assisted telecommunications by means of the Internet have become an important part of education and the curriculum, as well as a part of society as a whole.

The Fund for the Improvement of Post Secondary Education (FIPSE) was born in 1972 (Paulson, 2002). With a commitment to funding distance education by offering learning to American people anywhere at anytime, Internet learning environments or e-learning naturally became a part of the program, and by 1997 FIPSE had gained the attention of policy makers in Washington. The discontinued grant program, Learning Anytime Anywhere Partnerships (LAAP) modeled innovative ideas for policy changes that would "require conventional and on-line educational delivery" (Paulson, 2002, p. 3) to be a part of the postsecondary structures instead of operating outside of the postsecondary structure.

#### Goal of the Project

The author's goal of this thesis/project is to develop a web site that has resources for online learning tools and test it with an intended audience of instructional technology educators whose focus is in distance education. The secondary goal of this project is

to familiarize educators (who are also learners) in relation to distance education and distance learning environments to a number of online tools and software that are currently available. As technology advances and finds its way into the education system, both teachers and students are learning, therefore both teachers and students are learners. To facilitate information as well as to encourage learning the website, "Learning Tools for the Online Student," is designed for the purpose of enhancing this project. This website is an information center intended to familiarize both teacher and students to revolutionary online learning environments and software that are popularly utilized in both traditional classrooms as well as virtual classrooms. This site can be accessed on the Internet located at the URL address <http://www.geocities.com/dianasquillace/>.

In part, the purpose of this project is also to identify existing problems as well as to provide solutions to the problems that transpire as distance education and distance learning programs evolve. In some measure, the purpose of this project is to provide an argument in support of computer-assisted and Internet assisted distance education and distance learning programs for the mere reason that as the pace of society demands more from

students and employees, the incorporation of technology into the curriculum while offering distance education and distance learning programs to post-secondary students is not only inevitable it is necessary.

### Definition of Terminology

**Asynchronous technology:** Asynchronous technology are online discussion boards, email, bulletin boards, and whiteboards, that permit people to post written messages.

**Constructivist Theory:** The constructivist theory is a learning theory that views that learning is a process in which learners construct new ideas or concepts based upon knowledge that the learners have already attained through school and life experiences.

**Curriculum:** A curriculum is a course outline that may or may not include lesson plans.

**Collaboration environments:** Collaboration environments are on-line discussion platforms. Tapped-in is a collaboration environment that provides members with personal offices where members can call private meetings with the use of a dialogue box and even a whiteboard.

**Distance education:** Distance education is a means of educating when educators and learners are separated



geographically. The postal service was the vehicle utilized for educational delivery.

Distance online learning environments: Distance online learning environments are learning forums that include the syllabus, assignments posted, quiz labs, grades, hyperlinks, white boards and blackboards.

Listserv: Listservs are Internet tools used to contact many people at one time by means of email.

Objectivist theory: The objectivist theory implies that the humans' ability to understand the world abstractly and logically is attained through reasoning.

Online syllabus: An online syllabus is a prospectus or course outline that is posted to an online web site.

Rubric: A rubric is a learning tool used to accurately evaluate learners' strengths and weaknesses. Rubrics are also guides used to facilitate learners while they develop projects, write papers, and prepare presentation. Rubrics allow the learner to understand what is expected of him/her.

Storyboard: A storyboard is a visual script that tells a story while using pictures, similar to a comic strip. Storyboards need not be graphically perfect; they can be drawn in pencil, yet they need to be visually descriptive enough for another person (web master, filming

professionals, etc.) to see what is expected in each scene (setting, script, sound effects, action).

**Synchronous technology:** Synchronous technologies are computer-based telecommunications that link educators to learners and learners to educators so to collaborate in live sessions such as chat rooms and instant messages.

**Techno-constructivist:** A Techno-constructivist is an educator or facilitator who encourages students to use technology for self-directed learning.

**Two-column script:** A two-column script is a script divided into two columns. One column includes the sound effects and voice-overs, and the other column includes the actors and the scene.

**WebQuest:** A WebQuest is a focused lesson plan designed for investigative research projects done for the most part over the Internet. A WebQuest is designed with the purpose of keeping the learner focused on the subject matter in which the learner is researching while concurrently using study time well. In the year of 1995, Bernie Dodge and Tom March developed the WebQuest in 1995 at San Diego State University.

## Project Overview

Distance education and distance education programs are the upcoming wave of the future for students who "choose" to study online. The traditional face-to-face classroom will most likely always have its place for those who favor this learning style. However, the computer-assisted classroom is also becoming a part of the college students' learning experience as the computer and the Internet blend into the curriculum. The traditional classroom has already evolved as students collaboratively research the Internet and meet online within communities and societies that are designed to foster education. WebQuests are utilized more and more by educators as are Blackboard and collaboration communities like Tapped-in. The traditional inflexible hard-copy syllabus is being transcended by the more flexible and dynamic online syllabus that is interactive, multi-layered and student-centered.

Appendix A is a cd-rom that contains the main pages of the website, "Learning Tools for the Online Student," which can be viewed at <http://www.geocities.com/dianasquillace/>. Appendix B is the "A WebQuest: To Write a News Story." Appendix C includes the PowerPoint slide show example, "PowerPoint:

To Write a News Story." Appendix D, "Storyboard: Technology in the Classroom" is an example of a storyboard created in Inspiration 7. Appendix E is an example of a two-column script, "Two-Column Script: Technology in the Classroom" also created in Inspiration 7. Appendix F is "Technical Survey." Finally, Appendix G is the "CD Rom Text-Only Version: Learning Tools for the Online Student." The appendices were created and designed by the author of this project for the purpose of illustration.

Chapter two addresses literature and studies that support distance education and distance learning programs. It also explores the benefits as well as concerns of educators including some of the dangers and pitfalls that naturally go hand-in-hand with the use of Internet while characterizing programs and the students who utilize them. Past, present, and possibilities the future lends to computer based learning environments and the role of multimedia/hypermedia along with its benefits as well as its limitations are addressed here as well. This chapter also tackles the natural marriage of computer assisted learning environments and the Constructivist Theory. Chapter three presents analysis, methodology and design, and at last, Chapter four lends recommendations along with evaluations and conclusions.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

#### Introduction

The increased usage of multimedia and/or hypermedia in education pooled with constructivist instructional methods have brought distance education and distance learning environments to new levels. The role of multimedia has intrinsically altered the educator's pedagogical position from the traditional teacher-centered objectivist to more that of a facilitator as students simultaneously have become more engaged and self-motivated learners. The delivery of online WebQuests, syllabuses and lesson plans, tests and quizzes as well as the collaborative online learning environments naturally facilitate distance education and distance learning programs. Educators who tend to employ computer-assisted learning environments as well as constructivist instructional methods are referred to as techno-constructivists.

#### Distance Education: Past, Present, and Future

Briefly looking at the past, present, and future of education as a whole presents an understanding of how and why distance education and distance-learning programs have

become popular, predominantly among the younger generation of learners. Technology in itself lends to a more constructivist-learning environment that tends to encourage students to participate in meaningful discovery activities while generating the learner's own knowledge. The traditional classroom environment leans toward the objectivist theory lending to transmitted knowledge by means of teacher directed learning activities that tend to be structured and systematic (Roblyer, 2003).

By the same token, the importance of timely interaction between teacher and student is imperative, while in the past, distance education encountered more downfalls simply because of the delivery methods used while corresponding by means of the postal service. When considering transportation in the nineteenth century compared to transportation in today's time, correspondence was not timely. Presently, the postal service moves mail much quicker, however, not quick enough to be considered timely particularly in distance education programs. On the other hand, technology has solved many problems of the past pertaining to timely interaction between student and teacher via the Internet. A student can email an instructor a question one day and receive an answer that same day. Superior to email, chat rooms offer real-time

collaboration sessions that are even more meaningful and effective.

When considering the notion that distance learners tend to study independently, it is apparent that constructivist-learning methods are inherently a part of this learning style. The teacher-centered objectivist approach to education is less flexible than the constructivist approach, and this approach even seems oxymoronic when considering its use in a distance education and distance-learning program that is computer-assisted and by and large delivered via the Internet. In addition, the increased utilization of multimedia/hypermedia that is made available to learners automatically encourages constructivist learning as the learner tends to actively participate in his/her own generation of knowledge when using technology.

Nasseh (2001) contends that teachers' and students' roles are changing as a result of technology and the embraced theory of constructivism in computer-assisted learning environments. The teacher's pedagogic position as an educator is evolving to that of a facilitator rather than that of the traditional teacher-centered all-knowing provider of educational facts and materials. Concurrently, the effect of this pedagogical approach appears to be a

positive one, particularly for the learner. In fact, the student's learning role is more student-centered as the student becomes more actively involved and in control of his/her learning experiences. When the learner is in control of his/her learning experiences, the learner is ultimately responsible for the product he/she produces.

As technology finds its way to the traditional classroom setting, so does constructivism. Therefore, students are learning to learn more independently even in a classroom setting. Roblyer (2003) states that graduates in the year 2015 will be employed in jobs that essentially did not exist when this group of graduates first entered school. With this in mind, future learners will also be more prepared for independent study programs forcing them to become skilled decision makers. These graduates may also be more inclined to utilize distance education and distance learning programs simply because they are computer savvy and familiar with multimedia/hypermedia.

#### Literature and Studies: Internet Users

Tapscott (1998) points out the popularity of the Internet for numerous purposes including marketing, shopping, news, and education. He projected that home access to the Internet will have grown from 10 to 46



percent between the years 1995 and 2000. Because of this huge influx of home access to the Internet, the generation of youth to use the Internet between the ages of two and twenty-two in the year 1999 are coined as the "Net Generation." With this in mind, Tapscott affirmed that the growing popularity of Internet use among teenagers is particularly significant with an increased usage of 50 percent in 1994 to 74 percent in 1996 to 88 percent in 1997. Though the Net Generation in 1999 is noted as being among youth ages two and twenty-two, Internet communication in girls begins around the age of 11 and in boys around the age of 13.

#### Characteristics of Distance Learners

Traditionally, distance education is utilized when there is a need for it as is when students live in remote locations, or when a district budget located in a small community cannot afford to pay a specialized educator but can afford the use of telecommunication technologies to bring the educator to the classroom. Other situations of need include: students who are home schooled because of physical disabilities, or when parents home school their children because of religious beliefs. In post secondary education, single parents have found distance education

very useful and accessible. As Steiner (1995, p. 1) noted "Distance Education is instructional delivery that does not constrain the student to be physically present in the same location as the instructor." According to Stiener, the elements that define distance educations are:

1. The separation of teacher and learner for the majority of the instructional process.
2. The utilization of educational media to connect the teacher and the student.
3. The provision of two-way communication between teacher and student (Stiener, 1995).

Technology has made education convenient for computer savvy learners; as a result, the characteristics of distance learners have broadened as lessons can be transmitted electro magnetically to students by means of telecommunication technologies including radio; cable television, video, audio, and computer. Transmissions travel by means of telephone lines, cables, microwaves, satellites and light beams (Steiner, 1995).

A growing number of distance learners include those who are employed and have family responsibilities. These learners are not necessarily separated by distance, or by disabilities, but rather, they tend to be in need of convenient educational deliveries that save time as well

as money. For this group of learners, convenience is a vital issue.

According to Rath and Gaudet (1998), as the corporate setting evolves as a result of global competition, corporate employee training systems are utilizing multimedia-training programs that facilitate employee learning in cost effective yet productive methods. As products evolve via technology, the demand for effective computer-assisted training programs increases. Distance learning via the Internet and other telecommunications technologies in a corporate setting saves time and training expenses.

When considering the evolution of learning environments as a result of technology, then one must also consider the evolution of pedagogy. Based upon collected data, Nasseh (2003, p. 1) substantiates that "the old pedagogical approaches based on the objectivist model of learning do not meet possibilities created by information technology and the global network is a very important issue for higher educational institutions around the world." This in itself affirms that teachers must also be learners so to revolutionize their own pedagogical positioning. According to Thornburg (2002) as technology shifts the pedagogical positioning of teachers from

objectivists to constructivists, teachers are scurrying to find the time to learn how to use the technologies.

#### Distance Education and its Pitfalls

Most everything that is innovative comes with its pitfalls. The same is true with computer assisted learning environments. The Internet alone can cause distractions with advertisements and pop-ups, some of which are not age appropriate when dealing with younger learners. These distractions can cause the student to lose focus at any age.

Another dilemma that has shown its unsightly face is the increased influx of Internet predators. These predators can be dangerous to both young and old. It is important that Internet users be knowledgeable regarding predators who utilize the Internet to prey upon potential victims.

When considering constructivist assessment strategies, some educators might perceive these strategies as unreliable means of measuring student progress. However, rubrics and performance checklists dignify the measurement of student achievement. Other constructivist means of measuring student achievement include the

student's development of multimedia products, web pages, journals, and electronic portfolios (Roblyer 2003).

The inequality of privilege coined as the "Digital Divide," (Roblyer, 2003, p. 191) can hamper student's talents and competitiveness if underprivileged students are not financially able to purchase the technology necessary to learn by.

An additional problem lies among techno-phobic educators. Some educators dispute that with a full schedule of developing lesson plans, correcting papers, and parent-teacher meetings, etc., "they don't have time to spend hours clicking down blind pathways and getting frustrated just to learn how to use new tools" (Thornburg, 2001, p. 2).

#### Multimedia/Hypermedia Promotes Flexibility

Prior to discussing the various online programs made available to the online educator and online learner, it is important that one understands the importance of multimedia/hypermedia, and the significant role these educational technologies play in distance education and distance learning programs. Roblyer (2003) noted that multimedia and hypermedia are closely related; however they do differ significantly. Multimedia is an assortment

of media including still pictures, animation, sound, video, and text that are pooled into one computer or product for the purpose of communicating information. Hypermedia is simply multimedia with the additional ability to hyperlink (connect with hypertext links) from one location on the Internet to another with the purpose of retrieving stored information. Multimedia with the added flexibility of hypermedia lends to a more multi-layered learning environment that ultimately leads to Higher Order Thinking Skills (HOTS) and constructive learning.

Inspiration and Kidspiration software are examples of multimedia/hypermedia software. Made by the same company (Inspiration Software, Inc.), Inspiration is designed for the older student, while Kidspiration is designed for the younger student. Both Inspiration and Kidspiration are visual thinking tools that can be creatively utilized with colors and graphics by both the teacher and the student for the purpose of webbing diagrams, outlines, concept and idea maps, as well as storyboards and two-column scripts. The author of this project developed a storyboard example and a two-column script example for the purpose of this project. The storyboard example is titled, "Storyboard: Technology in the Classroom," (see Appendix D), and the

two-column script example is titled, "Two-Column Script: Technology in the Classroom" (see Appendix E). In addition both Inspiration and Kidspiration are the excellent brainstorming tools. The ability to add sound and listen to sound are added elements that make these software more inviting for the learner.

### The Power of Hypertext

Hypertext can be incorporated into any online project. Hypertext is a powerful appendage that is exploited as a tool to retrieve information from the Internet by simply clicking on a link that can be delivered in the form of text or graphics by means of email, PowerPoint, Inspiration, web pages, and other multimedia that provides the ability to hyperlink.

### Communication and the Internet

Roblyer (2003) acknowledged that the most important element in teaching and learning is the ability for teachers and learners to communicate effectively as well as frequently. Electronic communication has proven to be a useful vehicle to transmit written communication for both educators and learners.

MUDs (multi-user dungeon) and MOOs (MUD object oriented) are collaborative programs that permit many

users from different locations to interact electronically at the same time at the same Internet location by means of the Internet. These programs generally include discussion boards, whiteboards, and chat rooms. Discussion boards allow users to post thoughts and comments while allowing others to respond to the comments that have been posted. Whiteboards are generally used to post information, demonstrations, hyperlinks, and announcements. Chat rooms are Internet locations that provide places where users can engage in real-time communication. Instant messaging (IM) is a private chat room where only members with usernames and pins may join together for collaboration purposes.

Blackboard and Tapped-in are two popular examples of MOOs that are utilized commonly by both educators and learners for the purpose of collaboration via chat rooms. These sites are also utilized to present dynamic and interactive multi-layered learning environments.

Blackboard has the capacity to deliver entire courses online. This learning environment allows the teacher to post: quizzes and tests, calendars, syllabuses, announcements, discussion boards and locations to post assignments, personal information (email addresses, websites, telephone numbers, and physical addresses) and



grade information that can be viewed confidentially by students and teachers.

Tapped-in is an international virtual community where professional educators as well as students meet to collaborate on shared educational topics and subject matter. A calendar of discussions based on subject matter is provided for participants as well as a directory map to assist members and visitors as they navigate their way around the virtual community. Tapped-in offers the added amenity of free private office space to its members, with whiteboards provided for announcements and chat capabilities that are many times utilized for class meetings and discussions.

Email, simply said, is electronic mail. Email can be sent within an internal network such as a school network or a corporation network. Email can also be sent from one person's email address to a receiver's email address by means of the Internet.

Listservs are essentially electronic mailing lists. Educators use Listservs frequently. A listserv is a convenient means to send announcements, instructions, and newsletters to students who are enrolled in the same class or to members of particular collaboration groups.

## The WebQuest: A Focused Lesson Plan

The WebQuest is a focused Internet research project. Bernie Dodge with Tom March first developed the idea in 1995 at San Diego State University. To clarify, the WebQuest is a focused lesson plan designed for investigative research projects that are utilized primarily by means of the Internet. The objective of a WebQuest is to keep the student focused on the subject matter in which he or she is researching while simultaneously using Internet time well. The WebQuest, "WebQuest: To Write a News Story," (Appendix B) designed by the author of this project, is an example of a focused WebQuest.

Some educators favor using WebQuests as learning tools because they tend to employ Higher Order Thinking Skills (Hots) while encouraging constructive learning. HOTS is the ability to identify, organize, plan, and interpret information while understanding resources and knowing how to use these skills and resources while working with technology.

The online syllabus is a dynamic learning tool that in its own right can be considered to be a structured long-term WebQuest. Similar to the hard copied syllabuses traditionally delivered to students as printed handouts,

the online syllabus includes a structured agenda of course information, information about the lecturer, tasks and procedures, assignments, tests, a time-line, as well as the institutions rules and regulations. The significant difference between the hard copy syllabus and the online syllabus is that the hard copy is unchangeable and lineal, in comparison, the online syllabus has the ability to change and evolve while educators and students interchangeably interact through it. Another benefit is that research assignments can be launched from the syllabus itself by means of hyperlinks. The author of this project has provided a syllabus template for educators to utilize.

Chapter Three will address the web site "A Learning Tool for the Online Student" designed by the author of this theses project while focusing on analysis, design, preliminary findings, implementation, and the evaluation of this web site. The purpose of Chapter Three is also to demonstrate how the "A Learning Tool for the Online Student" is a one-stop web site where learners can familiarize themselves to learning software, rubrics, collaborative learning communities, design, and resources.

## CHAPTER THREE

### METHODOLOGY

#### Introduction

With the growing number of distance learners, many of who are educators, support and understanding is an essential ingredient for a successful distance learning experience. The web site, "A Learning Tool for the Online Student" is a one-stop web site where educators and learners can familiarize themselves to learning software, rubrics, collaborative learning communities, design, and resources. With this in mind, the essential question is, "What makes this web site an effective learning tool for the distance learner?"

Searching the Internet can be time consuming, and with the mass amount of information available over the Internet, distractions can result in learners losing focus. A one-stop learning web site that also functions as a focused WebQuest allows the educator and the learner to identify cohesively with one another while utilizing the power of the Internet to engage and incite the distance learner.

To verify the usefulness of this web site, this chapter will focus on analysis, design, preliminary

findings, implementation, and the evaluation of the web site by five professionals who have worked in the field of distance education and computer assisted learning environments for a minimum of five years.

### Analysis

Instructional technology professors and lecturers from California State University San Bernardino, Ball University in Indiana, and College of the Desert in Palm Desert, California were asked to review and critique the web site, "Learning Tools for the Online Student," by completing the anonymous "Technology Survey" (Appendix F) which was presented to them by the author of this project which included at the end of the survey the opportunity to evaluate the web site. The last request on the survey asks for supportive recommendations to facilitate a more effective learning web site. The survey was designed to make the process as simple as possible as well as time efficient. The participants of this survey are all professionally involved in computer-assisted technology and distance education and learning programs. Because computer-assisted distance education and learning via the Internet are so innovative and are constantly evolving, the educators in these fields are continuous learners. For

a brief description of the participants' professional roles in distance education and learning, see Table 1.

Table 1. Survey Participants' Professional Roles

Participant 1	<p>BA Criminology  BA Economics  MA Computer Science  Ed.D. Adult and Community Education with cognate in Computer Science</p> <p>Professional experience:</p> <p>Developed a web-based research site at Ball State University, which has results of the participant's research findings from 1996, 1998, and 2000 national studies</p> <p>Wrote a digital textbook and online materials for CS276</p> <p>Helped faculty in the development of online courses</p> <p>Member of the planning team to develop distance education program for Ball State University</p> <p>Helped School of Nursing to design three years plan for online courses and degree</p> <p>Published and presented over 10 papers about distance education, pedagogy, and learners</p>
Participant 2	<p>A.A  B.A. Communication  M.A. Instructional Technology  Multiple Subject Teaching Credential</p> <p>Professional Experiences:</p> <p>Educator K-12</p> <p>Adjunct Faculty, Cal State San Bernardino and California Baptist University</p>

Participant 3	<p>           Doctoral Degree Educational Administration and Leadership/emphasis in Technology            M.A. Educational Administration            B.A. Secondary Education                Major: Mathematics                Major: Physical Science                Minor: Chemistry            Fiber optics certification            Lan and cabling certification            Premio certified systems integrator            Certified Fiber Optic Installation for Local Area Networks         </p> <p>Professional Experiences:</p> <p>Technology, Desert Sands School District (DSUSD)</p> <p>Developed, coordinated and currently administer of the Online Copper and Fiber Certification in partnership with Anixter, Corning and Panduit. Implemented and currently administer the PEEP (Premio Educational Empowering Program).</p> <p>Developed, and implemented the Math Portal for middle and high school instructors.</p> <p>Representative for DSUSD's software and hardware implementation committee.</p> <p>Oversees technological areas that include: middle schools and high schools, training of the technology literacy grant teachers, digital high schools, education technology project participants, technology course articulation between the community college and DSUSD, technology staff development Grades 4 - 8 (AB1339) participants, MOUS training and proctoring, network and cabling course for all high schools (developed the framework and curriculum), and math portal committee.</p> <p>Instructor for Cal State University            Cal State University, San Bernardino, CA, La Sierra University, Riverside, CA, and Chapman University, Palm Desert, CA</p> <p>Instructor for online graduate courses</p> <p>Developer for online courses at La Sierra</p>
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	<p>University, Riverside, CA</p> <p>Instructor for Masters Technology courses, online and face-to-face technology courses</p> <p>Instructor for University of Riverside</p> <p>Instructor for the Computer Credential Course (New Dimension for Teaching)</p> <p>Technology Instructor for Administrators</p> <p>Instructor for Pepperdine's Connected University</p> <p>Technology and Education, Nationwide Training La Sierra University, Riverside, CA - 1999</p> <p>MOUS proctor and trainer for DSUSD</p> <p>Established the first public high school in California as a MOUS testing site</p> <p>Developed and implemented two new District courses, Managing Computer Systems and La Quinta High School On-Line.</p> <p>Computer Technician Desert Sands Unified School District Build, configure, troubleshoot and network computers and computer systems - 1992 to 1997</p>
Participant 4	<p>A.A. Natural Sciences</p> <p>B.S. Anthropology</p> <p>M.A. Anthropology</p> <p>M.A. Instructional Technology/Math/Science</p> <p>M.A. In Progress, Educational Administration</p> <p>California Educational Administrative Services Credential-Tier I, California State University, San Bernardino</p> <p>California Multiple Subject Teaching Credential, CLAD/1998/Clear, K- 9 Science Supplemental Authorization, California State University, San Bernardino</p> <p>Captain and Master [100 ton vessels, Power and Steam, Sail and Towing Endorsements] 1996 Marine Institute, US Coast Guard &amp;</p>



	<p>Merchant Marine Officer's Commission (795606), Point Loma, CA</p> <p>California General Contractor (544752) [B-1] California Community College Teaching Credential, Lifetime [ASL &amp; Anthropology]</p> <p>ELL Chair and SEI Science and Technology Teacher H.S. Truman Middle School</p> <p>Lecturer, Instructional Technology</p> <p>Science, Mathematics, and Technology Education Program, Department of Education California State University, San Bernardino</p>
Participant 5	<p>A.A. Business Administration B.A. Business Administration M.A. Education and Multiple Subjects Credentials M.A. Instructional Technology Two certificates in Spanish</p> <p>Professional Experiences:</p> <p>Past All American basket ball player Past president of Multi Ethnic Student Association at Seattle Pacific University Coordinator and teacher for the Academic Learning Center at College of the Desert where the participant teaches study skills, tutor training classes, online learning, and English as second language courses.</p>

The scope of the study was limited to five college and university professors, lecturers and instructional technology professionals whose expertise is in computer-assisted learning and distance education/learning programs. The first seven questions ask what and how these professionals utilize various learning platforms and learning tools in a distance education/learning

environment. Column "A" includes the questions and Column "B" includes the data gathered.

Column A Questions	Column B Answers
1. What is your area of expertise in the field of instructional technology?	1. All five responded: Instructional Technology 2. One: Science and Math
2. Does the college or university where you teach have a computer lab available to its students?	2. All five responded: Yes
3. Does the college/university where you teach employ distance education and distance learning programs?  3a. Characterize in one-word adjectives why students prefer distance education programs above face-to-face classrooms (distance, disabled, convenience)?	3. All five responded: Yes  3a. Three responded: Convenience One responded: Flexibility One responded: Time and place One responded: Learning technology by using it
5. Do you integrate WebQuests as a part of your course requirements?  5a. If so, how?	5. One responded: Yes Three responded: No One responded: Not all courses.  5a. One responded: When I do, they are asked to develop a Web Quest for their students. It is attached to their web page.  One responded: As collaborative lessons to support content
6. Do your students utilize online syllabuses?  6a. Do you prefer to use: Hard copy syllabus, online syllabus, or both?	6. All five participants responded: Yes  6a. Four participants checked online syllabus and one checked both.
7. Do you use virtual learning environments to:  7a. Present courses? 7b. For class instruction? 7c. For class meetings in a chat format? 7d. Collaboration with other professionals? 7e. Create lesson plans? 7f. Post grades?	7. Do you use virtual learning environments to:  7a. Four responded: Yes One responded: No  7b. All five responded: Yes  7c. Three responded: Yes One responded: No  7d. Two responded: Yes Three responded: No  7e. Three responded: Yes Two responded: No  7f. Two responded: Yes Three responded: No

Figure 1. Questions and Data Gathered

Question eight of the survey asks the participants to evaluate whether or not they feel that the web site "Learning Tools for the Online Student" is a useful learning tool for both distance education (teachers) and distance learning (students). This question will be included as a part of the evaluation section of this chapter.

When asking a group of computer technicians if they view computers as useful tools, it is probable that they will unanimously respond with the answer "yes". However, when the same technicians are asked if they prefer Macintosh to personal computers (PC), it is also probable that some will answer "Macintosh," and others will answer "PC," and some will insist that both are useful in different ways. The same is true for software and other learning tools.

Question nine of the survey examines the participant's preferences in hardware, software, and computer assisted learning environments. Though all of the participants are professionally involved in instructional technology, this part of the survey depicts instructional technologists individual preferences. Depending upon what is needed to complete a course effectively, hardware as well as software may vary significantly depending upon the

focus of the course, the program, and ultimately, the consumer (teacher). Note Figure 2 as an example. It is evident that the five instructional technology professionals who completed the survey concur that they all need the hardware, the Internet, and email. The survey depicts that the online syllabus may not be a necessity, however, its flexibility makes for a dynamic learning tool. When addressing learning forums, the survey depicts variation as a result of preferences and subject matter.

#### Preliminary Findings

Though a pool of five professionals does not represent the entire population of instructional technology professionals, this survey allows the reader to see the variation of preferences as well as opinions among even a small number of professionals who are employed in the same field. Each participant ranked hardware, software, and online learning tools slightly differently. With this in mind, it is essential that the designer of a learning web site be steadfast and cognoscente of current as well as popular hardware, software, and learning environments that are user friendly and that are Internet accessible.

## Design and Development

In the process of developing the web site, "Learning Tools for the Online Student," elements considered by the author of the web site to be characteristic of a good learning web site were implemented. The author designed and built the web site in Microsoft FrontPage; however, the web site plan was developed in Inspiration 7 (see Figure 3).

9. What tools do you use regularly to facilitate learning?	Participants checked "yes."	Comments
9a. Windows or Mac	Five	No comment
9b. Internet	Five	
9c. Email	Five	
9d. Online syllabus	Five	
9e. Blackboard	Three	
9f. WebQuests	Two	
9g. Collaboration websites.	Four	
9h. Quizlab.com	Zero	
9i. Microsoft FrontPage	Two	
9j. Microsoft PowerPoint	Four	
9k. Microsoft Publisher	Two	
9l. Dreamweaver	Two	
9m. Other	Three	No comment

Figure 2. Computer and Software Preferences

While developing the web site, these elements were considered:

1. The web site should run on any platform that is Internet accessible.

2. Legibility, clarity, and trouble-free navigation.
3. Include hyperlinks that clearly exemplify the association to the subject matter as well as a list of resources and links that support distance-learning environments.
4. The choice of colors and design was coordinated in such a way so not to cause distractions and to be easy on the eyes.
5. Both educators' and students' educational needs were considered.

#### The Goal of a Learning Web Site

The goal of a learning web site is to design a web site that engages both educators and learners as well as to promote cohesive terminology. The learning web site should be designed in such a way to promote collaborative learning through the introduction of discussion forums that are commonly utilized by both educators and learners.

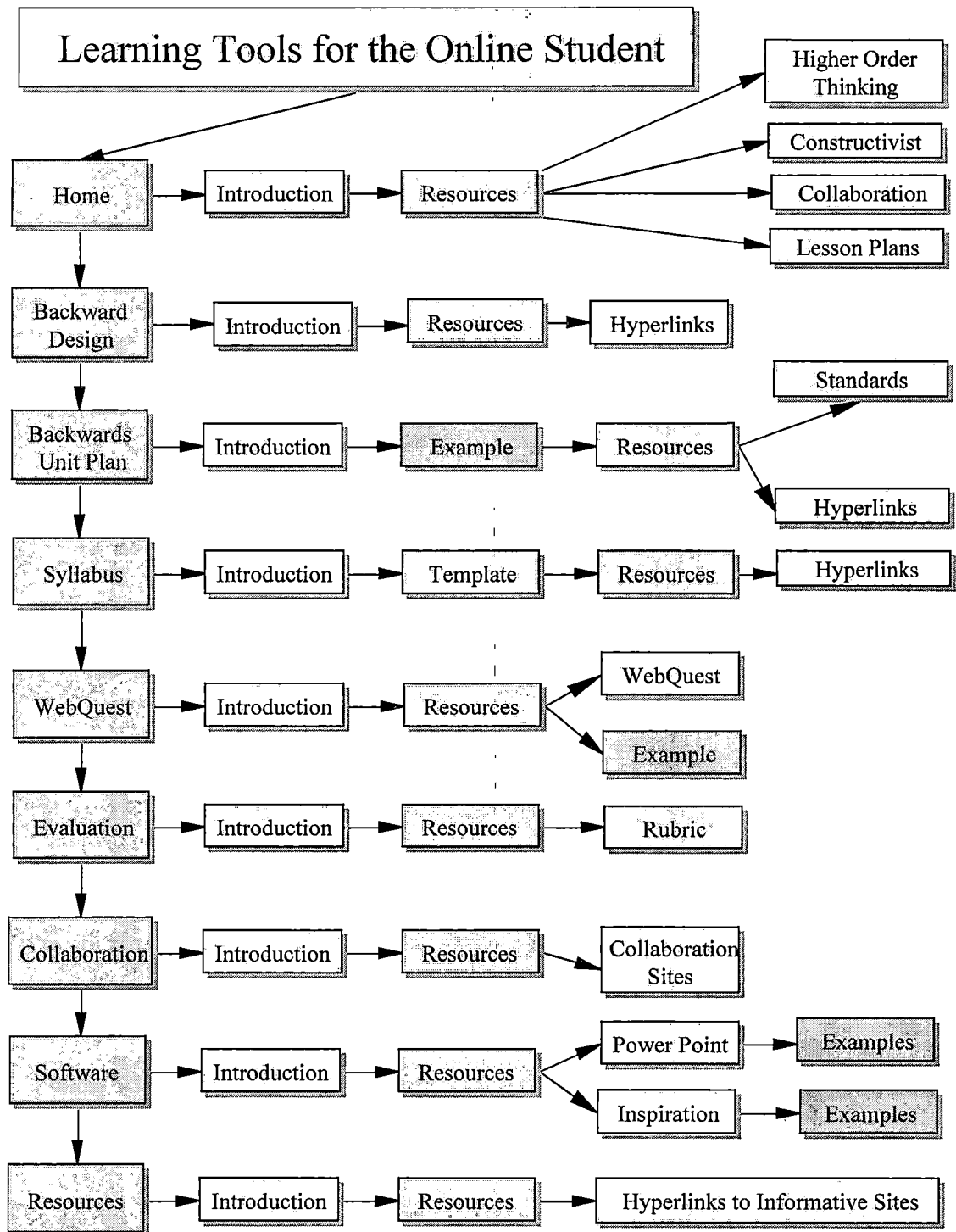


Figure 3. Web Site Plan: Designed in Inspiration 7



## Implementation

The author of this project uploaded "Learning Tools for the Online Student" to Geocities by which is accessible to most Internet users. The web site is posted to Geocities member directory under "Distance Education." The web site can also be accessed through Geocities member directory under "Instructional Technology." In addition, the author has emailed the URL of this web site to a large number of professionals who are working in the field of education as well as to learners of all age groups.

## Evaluation

The evaluation of the web site "Learning Tools for the Online Student" by professionals who are working in the fields of instructional technology and distance education is an imperative element that was included in the technology survey. Objective comments and recommendations given by these professionals have facilitated in the final development of the web site to indemnify an optimal learning tool for both distance educators and learners. It is also essential that this web site be evaluated semi-continuously to maintain a contemporary flow of information.

The survey utilized for this project was directed specifically to the educator. The purpose of the survey was to determine what hardware, software, and discussion forums that are commonly utilized by educators who are professionals in the fields of instructional technology and distance education programs. In addition the survey was designed to determine how and why the tools included in the "Learning Tools for the Online Student" are effective learning tools for the distance learner. To determine if the author of this web site has designed and developed an effective learning web site, question number ten in Figure 4 portrays the participants' opinions.

10. How would this website be most helpful to your students who are already educators? Check (X) your answers.	The number of participants to check "yes."
10a. Acclimating to online learning programs	10a. Five
10b. Collaboration forums	10b. Four
10c. Creating and using WebQests	10c. Three
10d. Using Backward Design	10d. Four
10e. Developing online syllabuses	10e. Four
10f. Using the resources	10f. Five

Figure 4. Evaluation

In conclusion, each participant was asked, "Did you have problems navigating through the website?" All

participants responded with the answer, "no." However, one participant found that there was a run-time error. The problem was addressed by the author of the web site from six computers located in various settings; no run-time errors were detected. The author also emailed several acquaintances and requested that they test the web site from their home computers; again, no run-time errors were detected. Additionally, the remaining subjects who had participated in the survey did not note any run-time errors. Conclusively, the author determined that the problem was likely a technical problem that existed beyond the perimeters of the web site. Note the comments and recommendations in Figure 5.

#### Survey Participant #1

It is a good web site for distance education teachers, students, and researchers. It introduces resources, articles, research reports that can help educators around the world. My recommendation is to continue adding new information and updating with new distance education resources.

#### Survey Participant #2

No problems really, I thought the navigation was straightforward and well thought out. I did keep getting a runtime error, something to do with a syntax error. Not sure if it is on my end or not, but it was sort of annoying. Fix the annoying error if you can and then just get more people to view it.

#### Survey Participant #3

No comments or recommendations

#### Survey Participant #4

At this time, I do not have any recommendations. However, I have a few comments. First, the web site is structured well. The introduction gives the reader an over view about the purpose and meaning of the site. Second, the site has an enormous amount of information from creating a syllabus to obtaining standards in the K-12 system.

#### Survey Participant #5

This is an excellent endeavor and I plan to use your Journalism web quest with my middle school students... Post more examples! Make sure you have opportunities for those of us who do not use WebCT or Blackboard to note that we design our own virtual environments/discussion forums... Great job!

Figure 5. Participants' Comments and Recommendations

#### Summary

While taking all input from the survey participants into account, the author of this project has surmised that the web site, "Learning Tools for the Online Student" has met the goal. All recommendations from the survey

participants were addressed and then incorporated into the web site.

Because personal preferences and subject matters vary so considerably, there is a slight difference among the five professionals uses of software and learning platforms. Some utilize popular learning forums as Black board, while another prefers to develop his/her own learning forum. Some use WebQuests for focused online research, while others do not. However, all are concurrent when it comes to the utilization of the Internet, email, and the online syllabus.

One participant had difficulties while trying to navigate through the web site. In response, the author of the web site addressed the situation and found that the problem was at the participant's end.

Another participant suggested that the author add more examples. The author responded to this request and added more examples to the resources.

All in all, the participants' evaluations and feedback was positive. In conclusion, the author of the web site "Learning Tools for the Online Student" has concluded that the initial goal to accommodate and familiarize educators of who are also continuous learners with a web site that has resources to be utilized as

online learning tools has been met. However, the need to keep the web site updated and current will continue. Therefore, the web site, "Learning Tools for the Online Student" will evolve as technology evolves.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### Introduction

This chapter's focus is on the presentation of the findings by which points out why the web site, "Learning Tools for the Online Student" is a useful learning environment for both distance educators and distance learners to familiarize themselves to popular software, collaboration forums, delivery methods, and lesson plans. The discussion of the findings elaborates on the presentation of the findings while validating the web site's purpose, "to deliver up-to-date information to both educators and learners in a user-friendly fashion in a format that is accessible to most Internet users while facilitating a continuity of terminology that can be accessed and understood by both distance educators and learners."

#### Presentation of the Findings

While keeping the author's goal in mind, "to design a web site that engages both educators and learners as well as to promote continuity in terminology and to promote collaborative learning through the introduction of discussion forums that are commonly utilized by both

educators and learners," the author of this project has compiled these findings:

1. Instructional technologists and distance educators are dependent upon computers to deliver subject matter to learners effectively.
2. Preference and subject matter determine the educator's choices in software, hardware and collaboration forums.
3. Collaboration and support are important elements that need to be included as a part of the online learning process.
4. Continuity in terminology among educators and learners is an imperative factor that promotes collaboration and effective learning.
5. Distance education and distance learning programs are growing more popular among the working population mostly because of the convenience these programs offer.
6. Distance education and distance learning can be utilized in a corporate setting to cost effectively train employees.
7. Software such as PowerPoint, Inspiration, and FrontPage dignify distance-learning programs.



8. The WebQuest is a lesson plan that facilitates a focused learning experience.
9. Online syllabuses are preferred by distance educators because of the flexibility online syllabuses provide.

### Discussion of the Findings

Distance education and distance learning programs via the Internet are earning popularity in this fast paced society, mostly because of one key commodity, namely "convenience." When considering the initial costs of hardware and software, a learner might choose the traditional face-to-face classrooms above distance education and distance learning via the Internet. However, if the student can afford such equipment, whether it be the result of economical privilege, student loans, or scholarships, distance education and distance learning programs can be very effective for the post secondary learner. With this in mind, the utilization of computers, software, the Internet, email, and collaboration forums are essential delivery tools considered necessary by both the educator and the learner as pointed out by the five instructional technology professionals who participated in the survey for this project.

The distance educator's choice of hardware, software, and collaboration forums are determined both by preference and subject matter. Several years ago, Macintosh was most popular for its flexibility in the area of graphic design. Certain software such as QuarkXpress and Adobe PhotoShop were solely Macintosh compatible. In recent years, QuarkXpress and Adobe PhotoShop have become compatible with other operating systems such as Microsoft, however, graphic designers may still prefer Macintosh, one because they are familiar with the Macintosh tools, and secondly because of individual preference and belief systems.

Distance learners tend to work and study independently, however, even these learners are in need of collaboration and support. Collaboration and support are important resources for the distance learner who is in need of understanding subject matter and even subject delivery.

Effective communication is an important part of the learning process. Both the educator and the learner must understand each other. Therefore, cohesive terminology is an imperative factor that promotes collaboration and effective learning. With this in mind, the central purpose of the web site "Learning Tools for the Online Student" was designed to provide a "friendly" web site that is

easily navigated by Internet users, that encourages the educator and the learner to speak and understand the same terminology. This is particularly helpful when a learner enters a distance education program and is has to register for intermediate classes because beginning classes that provide the fundamentals are not available.

Distance education and distance learning programs can be utilized in a corporate setting to cost effectively train employees. One example is: Indiana University School of Continuing Studies has created a program for people who are in business and industry, as well as in elementary, secondary education, and higher education. This program also offers training for health care and government workers. Their marketing statement is, "The program's goal is to enable you to use technologies to enhance the learning capabilities of your students, employees, and customers."

Software such as PowerPoint, Inspiration, and FrontPage dignify distance-learning programs.

The WebQuest is a lesson plan that facilitates a focused learning experience with hyperlinks provided for the learner to research by linking from the WebQuest. "To Write a News Story" is a WebQuest designed and developed

by the author of this project for learners to learn how to write a news story in Associated Press writing style.

Online syllabuses are preferred by distance educators because of the flexibility online syllabuses provide. As noted by the professionals who participated in the technology survey for this project, their answers to the question, "Do your students utilize online syllabuses?" all five answered, "yes." Only two out of the five participants answered, "yes" to the question, "Do you integrate WebQuests as a part of your course requirements?" It is interesting to note that some techno-constructivists consider an online syllabus to be a long-term WebQuest.

### Summary

As technology evolves and finds its way into the classroom as well as it finds itself into the average household, distance education and distance learning programs via the Internet are growing in popularity among adult learners who have family and employment obligations to attend to. For this group of learners, convenience is the key issue. A central online location where educators and learners can refer to in regards terminology is an imperative tool; otherwise communication would be chaotic

and unmanageable. Educators and learners need to speak in the same language.

As consumers' demand for distance education and learning programs increase, so do the number of programs, and as a result, universities are jumping on a nationwide distance education bandwagon to get a piece of the pie.

Education is big business, and when considering the number of educators, learners, and colleges involved, in distance education and learning programs, it is essential that educators and learners be on familiar terms. With this need in mind, the author designed the web site, "Learning Tools for the Online Student." Appendix G is a text only copy of the website by which was burned to a CD Rom, titled "Text-Only Version: Learning Tools for the Online Student."

The web site, "Learning Tools for the Online Student" is a useful learning environment where both educators and learners can familiarize themselves to popular software, collaboration forums, delivery methods, and lesson plans. This web site was designed to deliver up-to-date information to both educators and learners in a user-friendly fashion in a format that is accessible to most Internet users. The ultimate purpose of this web site

is to facilitate continuity regarding terminology within the learning community of distance educators and learners.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

As noted in chapter two of this theses project, distance education and distance learning have evolved significantly since its beginnings. Not only have the methods of delivery evolved, conversely so has the purpose. Initially, a typical distance learner was separated by distance, or by disabilities, however, technology and a fast-paced society have broadened the scope of distance education programs to learners who are employed and have family responsibilities. These learners are in need of convenient educational deliveries that save time as well as money.

To assist in this effort, the author of this project has designed the web site, "Learning Tools for the Online Student" in order to provide both educators and learners a free web site that promotes flexibility, friendliness, and support while encouraging collaboration through learning environments such as Blackboard, Tapped-in, WebQuests, and the online syllabus. However, without the objective opinions of techno-constructivists who are actively employed in the fields of instructional technology and

distance education, the site would have been in essence, ineffective. Therefore, the focus of this chapter is to discuss the recommendations paid to the author of the website by the techno-constructivist professionals of whom participated in the technology survey. In addition, this chapter addresses the author's conclusions and at last, the author has recapitulated the main elements discussed in this project in a summary.

### Recommendations

The author of this project recommends that educators and learners who are working and studying in the fields of instructional technology and distance education take time on a regular basis to see what other professionals in the fields are doing because technology continues to evolve very quickly. Online discussion groups are very informative, such as Tapped-in, by which is located at this URL address: <http://www.tappedin.org/>. Tapped-in is an online discussion forum where an international community of education professionals and learners meet to engage in professional development programs and informal live collaboration with colleagues. Tapped-in offers many amenities including: private offices with white boards and discussion forums, tours, a help desk, a calendar of



events and discussions, and transcripts of the discussions. Along with discussion forums, it is imperative that those who work and study in the fields of instructional technology and distance education, speak the same language. Therefore, it is necessary to check in on such sites as, "Learning Tools for the Online Student" regularly.

With the growing demand for distance education and distance learning programs, mostly because of the convenience and flexibility these programs have to offer to the working person who also has family responsibilities there are many programs opening up to learners. When looking for a program, learners need to be clear about what their focus is and then research which educational programs suit their focus best.

The United States is a fast-paced society where time is an amenity that most people who live and work in the country have very little of to spare. When considering convenience as an important yet valuable product amenity, a considerable number of learners are opting for distance learning programs. When considering supply and demand, "the proof is in the pudding" as universities join in on these popular yet cost saving programs. According to the University of Phoenix web site, University of Phoenix is

presently the leading private accredited university in United States. As an acknowledged leader in adult education, "more working adults further their education and achieve their career goals with the University of Phoenix than with any other school in the nation (University of Phoenix, 1999, p. 1)." Their marketing statement is, "You can earn your degree and still have time for your job, your family - your life (University of Phoenix, 1999, p. 1)."

Many more colleges and universities are now offering online distance education programs and marketing corporations are also "jumping on the bandwagon." Education is a moneymaking commodity. WorldWideLearn is a web site designed specifically to market online distance 1 WorldWideLearn web site earning. Their marketing statement is, "The more you learn the more you are (WorldWideLearn, 1999, p. 1)." Listed below are but a small number of online distance education programs found on the WorldWideLearn web site that focus on online distance education programs:

- California State University, Hayward offers a certificate program in Online Teaching and Learning.

- Appalachian State University offers a certificate in media education and instructional technology.
- Illinois Online Network University of Illinois at Springfield offers a masters program to attain an online teacher certificate.
- Offered by Marlboro College Persons School, The Graduate Center offers an Internet Teaching Certificate.
- Pace University/NACTEL offers certificate programs in telecommunications for people who are interested in becoming Network Technicians.
- Penn State College of Education offers an 18-credit graduate-level distance education certificate.
- Portland State University School of Extended Studies, Continuing Education in the Graduate School of Education offers a certificate program in distributed learning systems.
- St. Lawrence College, Ontario offers an online teacher certificate program.
- Simon Fraser University and TELES training in British Columbia jointly offers a certificate program in web-based instruction for instructors

who would like to change their traditional face-to-face classroom to online learning environments.

- State University of West Georgia offers a certificate program in distance education. Their marketing statement is, "to promote excellence in distance learning instruction and administration."
- Texas A&M offers a number of training programs and classes at The Center for Distance Learning Research at Texas A&M University, including: collaborative videoconferencing, distance education certification program, distance education web publisher certification program, distance learning administrator's certification program, technology coordinator certification program, resources for teachers, PC Academy, teaching and learning with technology, TIFTech training workshops, virtual instructor certification program, and telecommunication certification course.
- University of British Columbia (Canada) and Tec de Monterrey (Mexico) jointly offers two post-graduate certificate programs in

association with the master of educational technology degree: a post-graduate certificate in technology-based learning for schools and a post-graduate certificate in technology-based distributed learning.

- University of Calgary offers a certificate program: e-learning: Design and Facilitate Learning Online through their faculty of continuing education
- University of Maryland University College Graduate School certificate program in distance education.
- University of Washington offers certificates in distance learning design and development extension educational outreach.

University of Wisconsin-Madison Graduate Program in Continuing and Vocational Education offers a certificate program in distance education. The courses are presented via the Internet, audio conferencing, and modular print formats so travel is not required.

### Conclusions

In reference to the technology survey and the participants' answers, comments, and recommendations, the

author of this project has surmised several conclusions.

The conclusions taken from this project are as followed:

1. Professionals who are employed in the field of instructional technology and distance education programs need similar tools in order to deliver curriculum effectively. Some of these tools include: hardware (computers), software, and the ability to access the Internet.
2. Although there are many professionals who work in the fields of instructional technology and distance education, even among this small group of professionals who participated in this technology survey, their needs vary depending upon the delivery of subject matter; the type of computers utilized, software, and what is to be accomplished.
3. Preference is a human factor that broadens the horizons of any field while at the same time contributing flavors of diversity. Also, as in any field of expertise, instructional technology and distance education are no different, indeed, among a small group of only five survey participants, their preferences are quite

diverse, particularly when noting lesson plans, software, evaluation, and collaboration forums.

### Summary

Presented in Chapter Five is the examination of conclusions gathered from this project. Also included are the recommendations made by the five professionals who participated in the technical survey. In response to the recommendations, the author of this project discussed the solutions to the recommendations.

While online distance education and distance learning environments are the main focus of this project, various styles of educational deliveries were addressed, including the combination of asynchronous technology (email) with synchronous technology (television and video) as well as other computer-based telecommunications that link educators to learners and learners to educators. For the working post-secondary and college students who wish to enhance their education in a more convenient, timesaving, and cost-effective manner than what has been traditionally offered in face-to-face classrooms, virtual classrooms are growing in popularity.

As the technological landscape evolves and communication capabilities increase globally, issues and

concerns have materialized with the changes, including the philosophies as well as the pedagogical positioning of both traditional educators and distance educators. The role of multimedia has fundamentally altered the educator's pedagogical position from the traditional teacher-centered objectivist to that of a facilitator, as students concurrently have become more engaged and self-motivated learners. With this in mind, some educators are exasperated by the changes because of the additional education that is expected of them while carrying the already heavy load of developing lesson plans, presenting delivery of subject matter, after-school projects, parent/teacher conferences, and correcting papers and exams. Other problems that have been addressed in this project include the possibility of learners losing focus while researching subject matter via the Internet and worst of all, the possibilities of encountering predators while collaborating online. Several remedies were introduced to help guide the learner while helping the learner to maintain focus. WebQuests, online syllabuses, and evaluation rubrics are helpful learning tools that facilitate focus. In regards to online predators, learners should be instructed to exercise the same precautions



online as they would exercise anywhere else so not to fall victim to predators.

Even with the problems that accompany change and online distance education and learning programs, the increased usage of multimedia and/or hypermedia in education pooled with constructivist instructional methods have brought distance education and distance learning environments to new levels. The delivery of online WebQuests, syllabuses and lesson plans; tests and quizzes as well as the collaborative online learning environments logically facilitate distance education and distance learning programs. Technology has made education convenient for computer savvy learners; as a result, the characteristics of distance learners have broadened as lessons can be transmitted electro magnetically to students by means of telecommunication technologies including radio; cable television, video, audio, and computer.

APPENDIX A

CD-ROM COPY OF WEBSITE: LEARNING TOOLS

FOR THE ONLINE STUDENT

## APPENDIX B

### A WEBQUEST: TO WRITE A NEWS STORY

# To Write a News Story



*A WebQuest for 11th Grade*

*Journalism*

*Designed by: Diana Squillace*

*Email: annaban50@yahoo.com*

*The WebQuest Page*

## Introduction

Congratulations! You have decided to be a news writer. The principal of your school wants four school related stories written by students of his/her school to be published in the local community newspaper. First you must learn the "tricks of the trade," and then you must find the story and write it!

Go reporters!

## The Task

First, you will need to understand the important elements of journalism including Associated Press Writing Style, laws, and code of ethics. Each group member will research two of the questions using the resources provided to you.

Next, after gathering the information, you will share your discoveries with your group members.

After the information is clearly understood, your group will decide cooperatively on a school story. The story can be either a feature story or a news story. Remember to take your digital camera, because, as the saying goes, "A picture is worth a thousand words."

Each group member will write a news story. Your stories must be grammatically correct and must also comply with the Associated Press code of ethics, laws, and writing style. The stories must be written objectively, with accuracy and fairness. All of the journalistic elements must be used appropriately.

Meet that deadline!

# **The Process**

## **First Day**

Each group member will research two of these questions. Use the resources provided.

What is the Inverted Pyramid?

What is the Lead?

How should a news writer use quotes and attributions?

What questions should be answered in a news story?

What is the difference between a news story and a feature story?

## **Second Day**

Group members will discuss their findings from the previous meeting day.

Each member will read a news or feature story and identify the journalistic elements and collaborate findings with group members.

Group members will read over the Associated Press Stylebook and Briefing on Media Law and discuss your findings.

## **Third Day**

Based on your findings, each group member will choose to cover a school event and write a story about it using the elements of newspaper writing. One member will write a feature story and the other members will write news stories. Each story will include a photo.

## **Fourth Day**

After your stories are completed, group members will read and critique each other's story.

## **Fifth Day**

Your stories will be delivered to the principal of your school. He/she will read and edit your stories. Your stories will be entered into the community pages of your local newspaper.

# **Resources**

## Internet Resources

Associated Press Code of Ethics

Elements of Journalistic Writing

Inverted Pyramid

Lets Write a Newspaper Story

Newspaper Writing 101

**News Paper Writing Workshop**

**Newsroom for Students**

**On The Inside**

**Books**

**The Associated Press Guide to News Writing**

**Third Edition, 2000**

**By: Rene J. Cappon, Associated Press**

**The Associated Press Stylebook and Briefing on Media Law May, 2000**

**By: Norm Goldstein (Editor), Associated Press, Foreword by: Louis D. Boccardi**

**News and Feature Stories**

**A Red Sox Fan Would Prefer a Pox on Both Their Houses**

**Jeff Rense Program**

**Kidon**

**NewsMax.com**

**Materials and Tools**

**Computers**

**Digital Camera**

**CDs**

**Access to the Internet**

**Resources (books and links)**

**News writing notebooks**

**Pens**

## Evaluation

Each group will be evaluated on their organization, cooperation, and participation.

Each group member will be evaluated on the stories they write. This includes the use of all the journalistic elements, style, laws, ethics, sentence structure, grammar and punctuation. For extra credit (5 points), take a photo and write a caption that describes the photo in just a few words.

### Evaluation sheets

<b>Group #</b>	<b>Points Possible = 30</b>
Organization	1-10
Cooperation	1-10
Participation	1-10
<b>Student's name:</b>	<b>Points Possible = 70</b>
Headline (Does it tell the story?)	1-10
The Pyramid (Were the most important parts of the news story written at the beginning of the story?)	1-10
Byline (Does it give the writer credit?)	1-10
The Lead (Is it provocative? Does it tell the reader what is most important?)	1-10
Quotes and Attributions (Are they used properly?)	1-10
Body (Does it answer the 5 Ws and H?)	1-10
Ending (Does it give the reader something to ponder?)	1-10

## Conclusion

Now that you have written your first successful news story, and it has been published, keep your eyes open, because news is happening everywhere and every minute. Think about the events that are happening in your community. You'll find that many of the events happening around you are news worthy and you may just want to report on them. Save your published news articles and start building your portfolio because some day you may just find yourself chasing stories for a living some day.



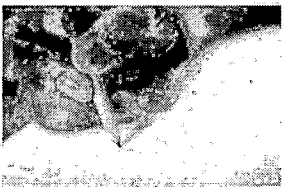
APPENDIX C

POWERPOINT: TO WRITE A NEWS STORY



## To Write a News Story

By Diana Squillace

<p><a href="#">The Lead</a></p> <p><a href="#">The Five Ws and How</a></p> <p><a href="#">Style</a></p> <p><a href="#">Photo and Caption</a></p> <p><a href="#">The Beat</a></p> <p><a href="#">The News Room</a></p> <p><a href="#">The Web</a></p> <p><a href="#">Finishing Up</a></p> <p><a href="#">Circulation</a></p> <p><a href="#">Learning Tools for the Online Student</a></p>	<p><i>To Write A News Story</i></p> <ul style="list-style-type: none"> <li>What key elements does a news reporter need to know about writing a news story?</li> </ul> 
<p><a href="#">The Lead</a></p> <p><a href="#">The Five Ws and How</a></p> <p><a href="#">Style</a></p> <p><a href="#">Photo and Caption</a></p> <p><a href="#">The Beat</a></p> <p><a href="#">The News Room</a></p> <p><a href="#">The Web</a></p> <p><a href="#">Finishing Up</a></p> <p><a href="#">Circulation</a></p> <p><a href="#">Learning Tools for the Online Student</a></p>	<p><i>The Lead</i></p> <ul style="list-style-type: none"> <li>The "lead" is the first sentence of a news story that is designed to entice the reader into reading the story. The lead is also a one sentence paragraph – it stands alone at the beginning of the story.</li> </ul>

[The Lead](#)

[The Five Ws and How](#)

[Style](#)

[Photo and Caption](#)

[The Beat](#)

[The News Room](#)

[The Web](#)

[Finishing Up](#)

[Circulation](#)

[Learning Tools for the Online Student](#)

## *The Five W's and How*

- ◆ Who?
- ◆ What?
- ◆ When?
- ◆ Where?
- ◆ Why?
- ◆ How?



**The story should answer these questions...**

[The Lead](#)

[The Five Ws and How](#)

[Style](#)

[Photo and Caption](#)

[The Beat](#)

[The News Room](#)

[The Web](#)

[Finishing Up](#)

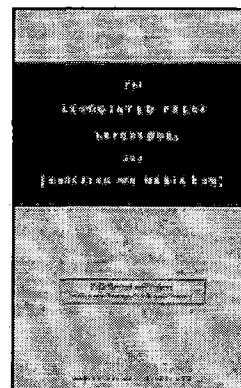
[Circulation](#)


[Learning Tools for the Online Student](#)

## *Associated Press Writing Style and The Law*

Every journalist should have a copy of Associated Press (AP) Writing Style and Laws...

AP is a journalist's Bible. It notes proper acronyms, format, laws that must be adhered to as well as politically correct adjectives.



<p><a href="#">The Lead</a></p> <p><a href="#">The Five Ws and How</a></p> <p><a href="#">Style</a></p> <p><a href="#">Photo and Caption</a></p> <p><a href="#">The Beat</a></p> <p><a href="#">The News Room</a></p> <p><a href="#">The Web</a></p> <p><a href="#">Finishing Up</a></p> <p><a href="#">Circulation</a></p> <p><a href="#">Learning Tools for the Online Student</a></p>	<h2><i>The Photo and the Caption</i></h2> <p>The subject of the photo needs to be at the forefront and centered.</p>  <ul style="list-style-type: none"> <li>• A caption is generally placed below a photo. The caption is a short description of the photo, sometimes including the who or what.</li> </ul>
<p><a href="#">The Lead</a></p> <p><a href="#">The Five Ws and How</a></p> <p><a href="#">Style</a></p> <p><a href="#">Photo and Caption</a></p> <p><a href="#">The Beat</a></p> <p><a href="#">The News Room</a></p> <p><a href="#">The Web</a></p> <p><a href="#">Finishing Up</a></p> <p><a href="#">Circulation</a></p> <p><a href="#">Learning Tools for the Online Student</a></p>	<h2><i>The Beat</i></h2> <p>Journalists are assigned by the editor of a publishing company an area to work in. If an event takes place within the perimeters of that area the story belongs to that reporter. The “beat” can also be the reporters’ forte’ such as: politics, features, community, schools, obituary...</p>

The Lead

The Five Ws and How

Style

Photo and Caption

The Beat

The News Room

The Web

Finishing Up

Circulation

Learning Tools for the Online Student

## *Back in the news room...*

- The print persons are preparing the Web press as the news reporters are writing stories and graphic artists' create "dummy" pages with advertisements placed. While the editor and his or her assistants are proofing copy that comes in, photos are being developed and half-toned...

The Lead

The Five Ws and How

Style

Photo and Caption

The Beat

The News Room

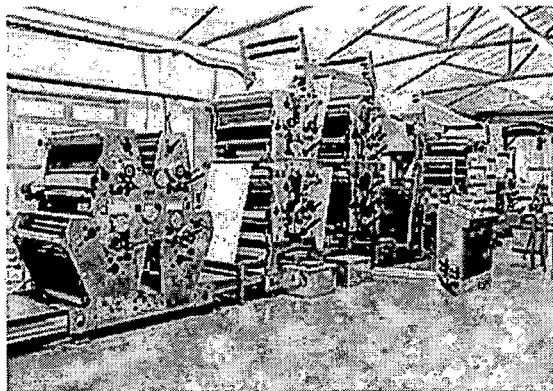
The Web

Finishing Up

Circulation

Learning Tools for the Online Student

## *The Web*



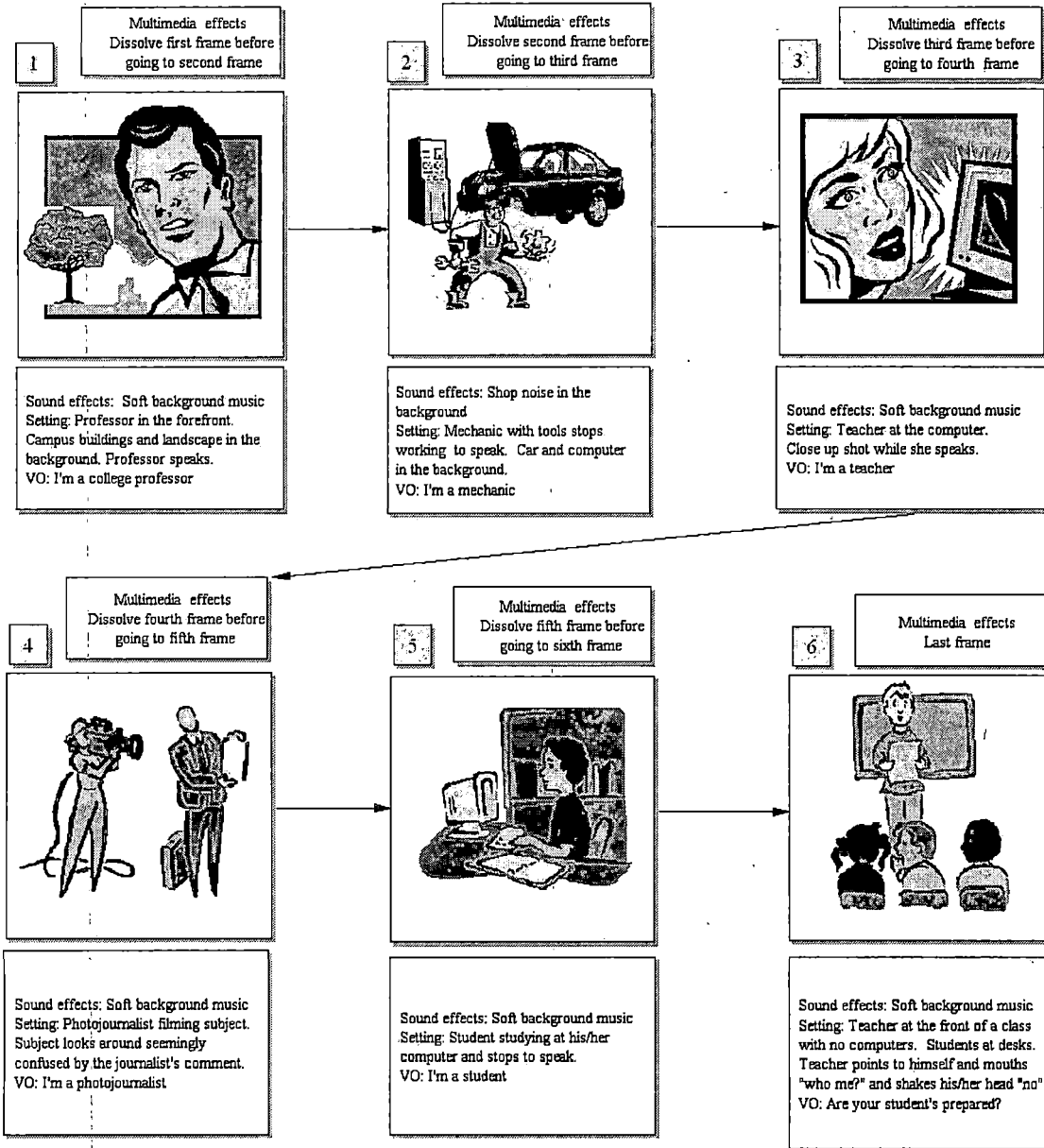
APPENDIX D

STORYBOARD: TECHNOLOGY IN THE CLASSROOM CREATED  
IN INSPIRATION 7

# Storyboard

## 15 Second Public Service Announcement Technology In the Classroom

By: Diana Squillace



APPENDIX E

TWO-COLUMN SCRIPT: TECHNOLOGY IN THE CLASSROOM

CREATED IN INSPIRATION 7

Two Column Script (15 seconds)  
Public Service Announcement  
Technology In the Classroom

By: Diana Squillace

Sound effects: Light music - begin slightly loud and then quiet background music

VO: I'm a college professor...  
(confident voice) and I teach  
Instructional Technology.

Sound effects: Noise from  
mechanic shop

VO: I'm a mechanic...and I use  
computers to fix engines.

VO: I'm a school teacher...  
(speak quickly)  
and I use computers in the  
classroom.

VO: I'm a photo journalist and  
I use computers to edit my photos.

VO: I'm a college student...  
(convincing voice)and I use computers

VO: Are your students prepared?

-----  
Professor standing on campus  
in front of buildings and landscape.

Mechanic in a mechanic shop holding  
a tool. Car in the background.  
Computer in the background.

School teacher speaking from  
the podium

News reporter interviewing a subject.  
The photo journalist is taking a photo  
of a subject who appears confused by  
the omniscient voice

College student sitting at a computer

Classroom with no computers, teacher  
at the front of the class. Teacher  
points to himself and mouths "Who me?"



APPENDIX F  
TECHNOLOGY SURVEY

Technology Survey  
Distance Education and Distance Learning  
Diana Squillace

Interviewee # \_\_\_\_\_

The author of this theses/project has requested that you participate in this survey because you are a professional in the field of Instructional Technology and/or Distance Education. The ultimate use of this online survey/interview is to perfect the web site, "Learning Tools for the Online Student," by which is designed to assist both instructors and students who are involved in distance education and distance learning programs. Your names will remain anonymous, however, your responses, comments, and recommendations will be published as a part of this theses project. Your acceptance to participate is greatly appreciated.

1. What is your area of expertise in the field of instructional technology?  
☐ Instructional/Educational Technology  
☐ Science  
☐ Math  
☐ Other: \_\_\_\_\_
2. Does the college/university where you teach have a computer lab available to its students?
3. Does the college/university where you teach employ distance education and distance learning programs?
  - 3a. Characterize in one-word adjectives why students prefer distance education programs above face-to-face classrooms (distance, disabled, convenience)?
4. Do you use virtual learning environments as a part of your program?
  - 4a. If so, what programs do you use (Blackboard, Tapped-in, Quizlab, etc.)?
5. Do you integrate WebQuests as a part of your course requirements?
  - 5a. If so, how?

6. Do your students utilize online syllabuses?

6a. Do you prefer to use: (Check X answer)

- ☐ Hard copy syllabus  
☐ Online Syllabus  
☐ Both

7. Do you use virtual learning environments to:

		Yes	No
7a.	Present course materials?		
7b.	For classroom instruction?		
7c.	Class meetings in a chat format		
7d.	Collaborate with other professionals?		
7e.	Create lesson plans?		
7f.	Post grades?		

8. Do you feel that the website "Learning Tools for the Online Student" is a useful learning tool for both distance education (teachers) and distance learning (students)?

8a. If so, how?

9. What tools do you use regularly to facilitate learning?

		Check (X) Yes
9a.	Windows or Mac.	
9b.	Internet.	
9c.	Email.	
9d.	Online syllabus.	
9e.	Blackboard.	
9f.	WebQuests.	
9g.	Collaboration websites.	
9h.	Quizlab.com.	
9i.	Microsoft FrontPage.	
9j.	Microsoft PowerPoint.	
9k.	Microsoft Publisher.	
9l.	Dreamweaver	
9m.	Other	

10. Please evaluate the website, "Learning Tools for the Online Student at <http://www.geocities.com/dianasquillace/>." How would this website be most helpful to your students who are already educators? Check answers below:

		Check (X)
10a.	Acclimating to online learning programs	
10b.	Collaboration platforms	
10c.	Creating and using WebQuests	
10d.	Using Backward Design	
10e.	Developing online syllabuses	
10f.	Using the resources	

11. Post project. Please complete the questions listed below.

11a. Participant used the project on \_\_/\_\_/\_\_. Participants' comments.

11.b Did you have problems navigating through the website?

11c. Participants recommendations:

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